NICU Caregiver Resilience Annotated Bibliography

A Resource for Medical Providers in the NICU Environment

Purpose

Provide an overview of the emotional and psychological impact of the NICU and what role medical providers can play to assist caregivers in developing resilience to support their infants

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Barnett KAI, Sanders A, Kyser R, Babagoli B, Goyal D, Le HN. A Scoping Review of Preventive and Treatment Interventions of Parental Psychological Distress in the NICU in the United States. Int J Environ Res Public Health. 2025 Oct 20;22(10):1592. doi: 10.3390/ijerph22101592. PMID: 41154996; PMCID: PMC12563366.

Summary

In this scoping review, 18 studies researching interventions for parental psychological distress were included. Mothers and fathers of infants in the NICU experience psychological distress, often resulting in depression, anxiety, stress, and trauma symptoms. Prevention treatments include psychotherapeutic, educational, and educational-behavioral. Psychotherapeutic interventions based on CBT may lead to reduced depression, trauma, and anxiety symptoms in mothers. Educational interventions can decrease depressive and anxiety scores, though they can increase stress due to information overload. Mobile-enhanced Family Integrated Care, an educational-behavioral intervention, effectively prevented PTSD symptoms in mothers with high levels of NICU-related stress. Mothers who participated in massage demonstrated decreased depressive symptoms. The Creating Opportunities for Parent Empowerment (COPE) program was the most effective out of all preventative interventions, with a significant decrease in depression and anxiety. COPE was specifically effective for young mothers and mothers with a trauma history.

Application

Interventions should be brief and flexible to improve participation. There is a significant decrease in psychological stress with 6 sessions of trauma-focused CBT (decreased trauma and depression), COPE program (decreased anxiety and depression), empathetic listening and problem solving (decreased depression and anxiety), or parent education and participation in mindfulness-based neurodevelopmental care (decreased stress).

Farmer ML, Hull WL, Bell TR. Understanding the Emotional and Psychological Impact of Parental Stress in the NICU. Neonatal Netw. 2025 Dec 1;44(6):400-408. doi: 10.1891/NN-2025-0024. PMID: 41371971.

Summary

The NICU experience extends beyond the infant to parents, impacting mental health, well-being, and stress. NICU-specific stressors include the unpredictable nature of the infant's condition, frequent medical procedures, prolonged hospitalization, parent-infant separation, medical equipment, alarms, and constant monitoring, which impact family routines, relationships, bonding, and traditional roles. Limited health literacy, language barriers, and information overload are communication barriers that can increase stress. Prolonged activation of stress pathways can increase vulnerability to postpartum depression (PPD) and posttraumatic stress disorder (PTSD).

In this review on the emotional, psychological, and physiologic effects of NICU-related stress, the following were identified. PPD affects 10% of all birthing parents, with increased rates in preterm infants up to 70%. PTSD diagnostic criteria are met in about 30% of NICU parents. Due to the high risk of PPD and PTSD, trauma-informed care is essential in the NICU environment. Marginalized and underserved populations often experience increased stress and decreased access to resources due to non-medical influences on health.

Application

To reduce parental stress in the NICU, staff training and parent resources, and involvement in care are recommended. Staff training on trauma-informed care, culturally sensitive care, and communication strategies can reduce parental stress and trauma during NICU stay. Ensuring providers receive adequate training on mental health screenings is critical for early identification and treatment. Staff should also work to create educational materials and encourage parents to participate in routine care and skin-to-skin contact to improve parental attachment and role attainment, thereby decreasing stress and fear.

Grunberg VA, Vitcov GG, Belkin E, Davis JO, Van E, Lerou PH, Vranceanu AM. Resiliency factors relevant to NICU parents' emotional and relational health. J Perinatol. 2026 Jan 13. doi: 10.1038/s41372-025-02556-y. Epub ahead of print. PMID: 41530447.

Summary

Up to 50% of parents in the NICU experience emotional distress, impacting parent-child interactions, partner relationships, mental health, and child development. Resilience—"the dynamic process that promotes well-being following an adverse event"—plays a key role in this setting. To identify individual and relational resiliency factors early on, parents completed self-reported measures at NICU admission, 1 month, and 3 months.

Depression and anxiety levels did not change over time, but lower levels were associated with higher mindfulness, adaptive coping, and (for anxiety) parental self-efficacy. Post-traumatic stress decreased over time and was linked to higher mindfulness, adaptive coping, and parents taking time for themselves. Couple satisfaction decreased across timepoints, though dyadic coping and social support were associated with better satisfaction. Parent-child bonding remained stable, with higher parental self-efficacy linked to stronger bonding. Overall, mindfulness and adaptive coping were consistently associated with less parental distress.

Application

Family-centered, resiliency-focused interventions are needed in the NICU to promote confidence, connection, and coping. Key individual and relational factors include mindfulness, coping skills, parental self-efficacy, time for self/family, dyadic coping, and social support. Mindfulness and relaxation can decrease depression and anxiety, while building emotion-focused coping helps reduce distress. Encouraging parents to take time for themselves can decrease post-traumatic stress, so NICU staff should provide education and support. Parental self-efficacy can be strengthened through routine care and skin-to-skin. Supporting communication, recognizing different coping styles, and promoting dyadic coping and social support can positively impact couple bonding and long-term family outcomes.

Laporte G, Sergerie-Richard S, Genest C, Aita M. Family Resilience as an Emerging Concept in Neonatology: Evidence From a Metasummary Review. J Perinat Neonatal Nurs. 2023 Aug 14;39(4):298–311. doi: 10.1097/JPN.0000000000000761. Epub ahead of print. PMID: 37582182; PMCID: PMC12560185.

Summary

In this metasummary review, 46 studies regarding parental NICU experience were identified. Family resilience is “the ability of a family, as a functional unit, to withstand and rebound from adversity.” Walsh’s Family Resilience Framework describes three key domains - shared belief system, organizational processes, and communication processes. Processes within the shared belief system domain include making meaning of adversity, positive outlook, transcendence, and spirituality. In the NICU, families experience a shift in reality, requiring them to make sense of the crisis before engaging with other processes. Components of the organizational processes include flexibility, connectedness, and mobilizing social and economic resources. Balancing individual and family needs, connectedness with the new family member, and a sense of unity are unique themes in the NICU environment. Support from other NICU parents, social media, and support groups was identified as the most important support. Family and friends were essential for functional support. The informational and emotional support from providers left many families wanting more. Communication processes include clarity, open emotional sharing, and collaborative problem solving. While some parents have difficulty sharing negative emotions, positive emotions improve coping, attachment, and happiness.

Application

To increase family resilience, the following are recommended: individualized needs assessments, opportunities for connection, support groups, family presence at bedside, meaningful involvement in care, enhanced provider support, and open communication.

Okito O, Yui Y, Wallace L, Knapp K, Streisand R, Tully C, Fratantoni K, Soghier L. Parental resilience and psychological distress in the neonatal intensive care unit. J Perinatol. 2022 Nov;42(11):1504-1511. doi: 10.1038/s41372-022-01478-3. Epub 2022 Aug 4. PMID: 35927487.

Summary

In this observational cohort, parental resilience, depression, anxiety, stress, and social support measures were utilized to identify factors associated with resilience and psychological distress across 2 time points (2 weeks and 6 weeks). Parents of infants in the NICU experience higher levels of psychological distress, with 33% reporting depression and 31% reporting anxiety in the early hospitalization phase. At 6 weeks into the hospitalization, these decreased to 14% and 24%, respectively. The Connor-Davidson Resilience Scale quantifies resilience with a score of 0-100, with higher scores indicating increased resilience. The median for resilience at 2 weeks was 77, increasing to 87 at 6 weeks of hospitalization. Parents with increased resilience scores demonstrated lower scores for depression and anxiety screening at 2 weeks; therefore, resilience may be associated with fewer depression and anxiety symptoms. Parents from greater economic advantage neighborhoods had 6.5 times greater odds for a positive anxiety screen and increased NICU stress compared to those from disadvantaged neighborhoods. It is hypothesized that this association is due to coping mechanisms that have developed over time in those low-resourced neighborhoods. Greater resilience was associated with decreased symptom severity of anxiety and depression during the early NICU admission.

Application

Some caregivers are at increased risk for NICU stress due to individual factors. Interventions targeted at resilience may reduce anxiety and depression scores on screening tools. Therefore, family resilience interventions should be incorporated into the NICU environment.

Ivashchuk A, Guillen U, Mackley A, Locke R, Sturtz W. Parental protective factors and stress in NICU mothers and fathers. J Perinatol. 2021 Aug;41(8):2000-2008. doi: 10.1038/s41372-020-00908-4. Epub 2020 Dec 18. PMID: 33339983.

Summary

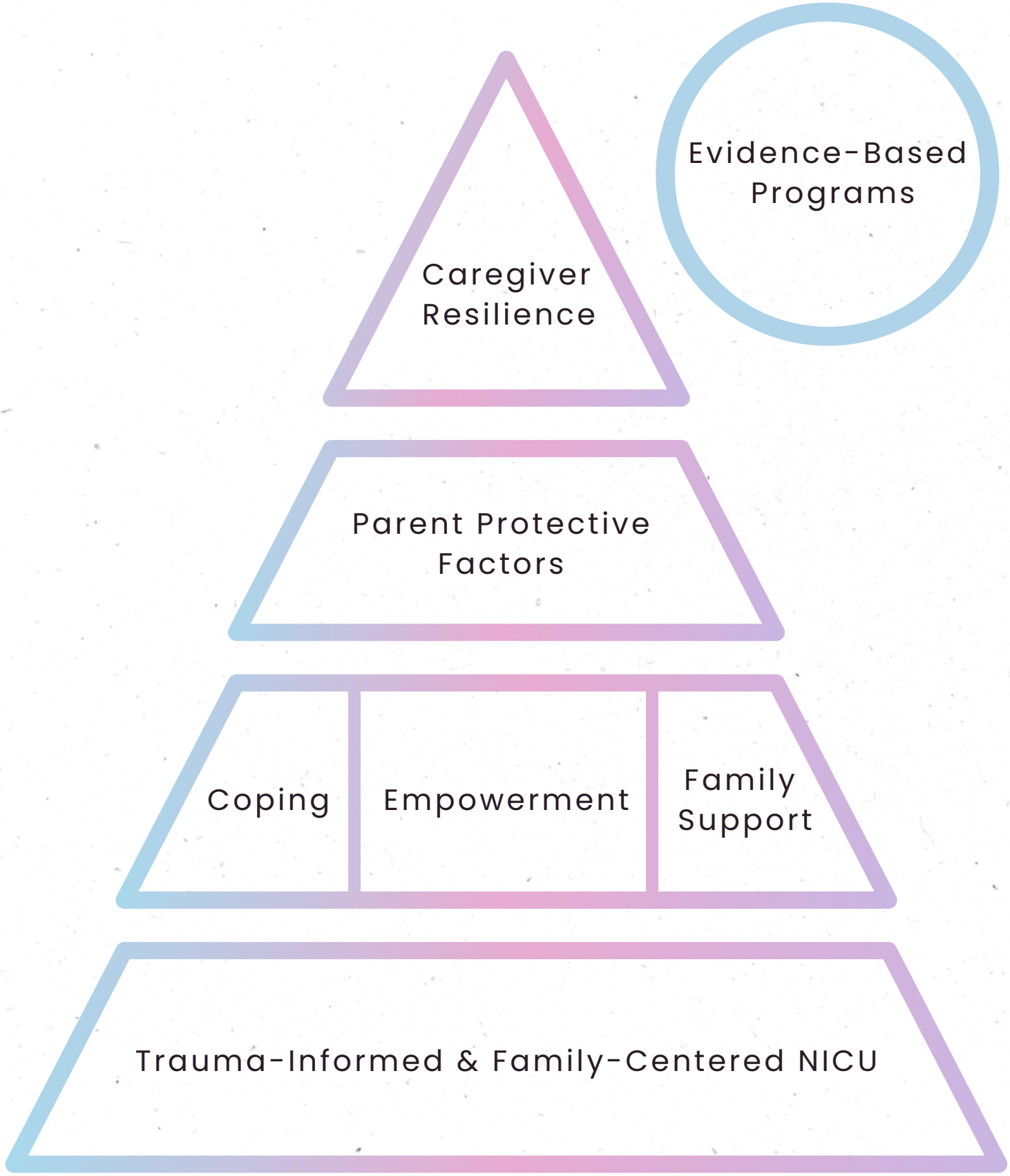
In this prospective study, parents completed stress, protective factor, and health literacy outcome measures across 2 time points (early NICU admission and before discharge). Protective factors are "conditions or attributes of individuals, families, communities, or the larger society that both mitigate risk factors and actively enhance well-being." The Strengthening Families Approach and Protective Factors Framework identifies the following as protective factors: parental resilience, social connections, concrete support in times of need, social and emotional competence of children, and knowledge of parenting and child development.

Parental stress was not significantly associated with resilience or concrete support. Social connections were positively associated with parental stress, with higher scores correlating with increased stress. Parental role alteration decreased from the initial assessment to the final assessment. Parental stress was not significantly impacted by health literacy, previous NICU exposure, infant illness severity, parent gender, or mental health diagnosis. Protective factors may not decrease parental stress.

Application

All parents and families in the NICU require thoughtful, meaningful interactions with providers to assess support needs and discuss their infant's medical status.

Supporting Caregiver Resilience in the NICU



Caregiver Resilience

- Increased parental self-efficacy and coping[3]
- Reduced stress, anxiety, depression, and trauma[1,3]
- Improved parent–infant attachment[2]
- Enhanced family functioning and long-term outcomes[4]

Parent Protective Factors

- Increased parental self-efficacy and confidence[3]
- Improved coping skills and emotional regulation[3]
- Reduced stress, anxiety, and trauma symptoms[1,3]
- Strengthened social and partner support[3,4]

Coping

- Mindfulness and relaxation strategies[3]
- Emotion-focused coping skills[3]
- Encouraging time for self and family[3]
- Building social support networks[3]

Empowerment

- Participation in routine caregiving activities[2]
- Skin-to-skin contact to promote bonding[2]
- Education to build parental self-efficacy[3]

Family Support

- Partner communication and shared coping[3]
- Recognizing different coping styles[3]
- Promoting dyadic coping and mutual support[3]

Trauma Informed & Family Centered NICU

- Trauma-informed, culturally sensitive communication[2]
- Early mental health screening and referral[2]
- Accessible parent education materials[2]
- Family presence and involvement in care[4]

Evidence-Based Programs

- Trauma-focused CBT reduces trauma and depression[1]
- COPE program improves anxiety, depression, and confidence[1]
- Nurse-led empathetic listening & problem-solving reduces distress[1]
- Mindfulness-based education improves stress and engagement[1]

References

1. Barnett KAI, Sanders A, Kyser R, Babagoli B, Goyal D, Le HN. A Scoping Review of Preventive and Treatment Interventions of Parental Psychological Distress in the NICU in the United States. Int J Environ Res Public Health. 2025 Oct 20;22(10):1592. doi: 10.3390/ijerph22101592. PMID: 41154996; PMCID: PMC12563366.
2. Farmer ML, Hull WL, Bell TR. Understanding the Emotional and Psychological Impact of Parental Stress in the NICU. Neonatal Netw. 2025 Dec 1;44(6):400-408. doi: 10.1891/NN-2025-0024. PMID: 41371971.
3. Grunberg VA, Vitcov GG, Belkin E, Davis JO, Van E, Lerou PH, Vranceanu AM. Resiliency factors relevant to NICU parents' emotional and relational health. J Perinatol. 2026 Jan 13. doi: 10.1038/s41372-025-02556-y. Epub ahead of print. PMID: 41530447.
4. Laporte G, Sergerie-Richard S, Genest C, Aita M. Family Resilience as an Emerging Concept in Neonatology: Evidence From a Metasummary Review. J Perinat Neonatal Nurs. 2023 Aug 14;39(4):298–311. doi: 10.1097/JPN.0000000000000761. Epub ahead of print. PMID: 37582182; PMCID: PMC12560185.